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NASA Joins International Ozone Study In Arctic

NASA researchers will join more than 350 scientists from the United States, the European Union, Canada, Iceland, Japan, Norway, Poland, Russia and Switzerland this winter to measure ozone and other atmospheric gases using aircraft, large and small balloons, ground-based instruments and satellites.

This second SAGE III Ozone Loss and Validation Experiment (SOLVE II) campaign will be conducted in close collaboration with the European Commission, sponsored by the VINTERSOL (Validation of International Satellites and Study of Ozone Loss) campaign. (SAGE III stands for the third Stratospheric Aerosol and Gas Experiment.) SOLVE will take place in Kiruna, Sweden, the site of the first international effort during the winter of 1999-2000.

"The primary goals of the joint SOLVE II-VINTERSOL campaign are to further understanding of ozone loss processes in the Arctic, and verify that satellite observations of the ozone layer are accurate from space," said Michael Kurylo, SOLVE II co-Program Scientist at NASA Headquarters.

Ozone studies are important because the ozone layer prevents the sun's harmful ultraviolet radiation from reaching the Earth's surface. Ultraviolet radiation is a primary cause of skin cancer. Without protective upper-level ozone, there would be no life on Earth.

The Arctic campaign will run from January 8 through February 6, 2003. Flights of large balloons will augment the aircraft campaign, extending the measurement period from late November 2002 to late March 2003.

During the campaign of 1999-2000, record ozone losses of 70 percent were observed at altitudes around 18 kilometers (11 miles) and a great deal was learned about the processes leading to the rapid ozone loss in the Arctic. The SOLVE II campaign will add to that knowledge.

During the coming winter, scientists in SOLVE II-VINTERSOL also will work

toward ensuring the accuracy of measurements from current Earth observing satellites. Scientists will take measurements of the stratosphere using a large suite of instruments aboard NASA's DC-8 aircraft and the European high-flying aircraft M55 Geo-physica, the German DLR Falcon. An instrument from NASA's Jet Propulsion Laboratory also will fly on the M55 Geophysica. These planes will be based in Kiruna.

Research balloons, carrying payloads weighing up to several hundred pounds will be launched from Kiruna for by teams from the Centre National d'Etudes Spatiales (France's National Center for Space Studies) and NASA. A network of over 30 stations of ground-based instruments will take atmospheric readings over a wide area, which will show how the chemical composition of Arctic stratosphere evolves through the whole winter.

VINTERSOL is a pan-European campaign involving researchers supported by the European Commission and national research agencies. NASA's SAGE III satellite instrument is being used to quantitatively assess ozone loss in the higher latitudes.

SAGE III was launched onboard a Russian Meteor-3M spacecraft on December 10, 2001. The validation of the SAGE III observations is a principal goal of SOLVE II.

For information about SOLVE 2 see: <http://cloud1.arc.nasa.gov/solveII/index.html>

For information about SAGE III see: <http://www-sage3.larc.nasa.gov/>

NASA Wallops Flight Facility, Balloon Program Office is supporting the Arctic study with one very large scientific balloon.

In addition, Frank Schmidlin, Upper Air Instrumentation Research Projects, in the Observational Science Branch at Wallops, anticipates launching Super Loki Falling Spheres and balloon-borne radiosondes for SOLVE 2.

Wallops shorts..... In the Field

Wallops NSROC personnel have departed for White Sands Missile Range, N.M., preparing for the launch of a Terrier-Black Brant currently scheduled for November 14.



AETD Photo

AETD Director Rick Obenschain and Tina Wessells

Congratulations!

Tina Wessells, Applied Engineering and Technology Directorate (AETD), was selected to receive the AETD Excellence Award for Professional Administratives. Rick Obenschain, Director of AETD, presented Tina with the award at Wallops on October 21.

In the news

Keith Koehler, Public Affairs Office, appeared in the monthly "Eye in the Sky" segment on WBOC-TV, Salisbury, Md., on November 5. The topic was the upcoming Leonid Meteor showers.

Eastern Shore News

"Satellite to Study the 'Space in Space' Nears Launch"

Palestine Herald-Press

"Balloon Facility Unveils New Launch Vehicle"



NSBF Photograph

The BOSS, (above), a new long duration balloon (LDB) launch vehicle, was designed by engineers at the National Scientific Balloon Facility in Palestine, Texas, and will be used for LDB flights in Antarctica. The 40-ton truck is 58-feet long, with tires measuring over 4-feet tall. The vehicle will be able to travel through ice, snow, four feet of water with the ability to climb a 50 degree grade going forward and backward and traverse a 30 degree side slope. It will be able to operate in temperatures well below -50 degrees Fahrenheit.

Wet and Warm

By Bob Steiner, Meteorologist

We experienced what is not your average weather for October, with a 90 degree reading on the 3rd that set an all time high and then tied it on the 5th. The previous all time high was a reading of 89 degrees that occurred on Oct. 3 and 5, 1986, and again on Oct. 6, 1987.

With 19 daytime highs above normal and 21 nighttime highs above normal, we can see why the monthly average of 62 degrees was 3 degrees above normal for October.



After several months with rainfall amounts below normal, we received almost 6 inches of rain during October. This is 2.66 inches above normal and .84 inches more than was recorded in 1999 when hurricane Harvey plus a strong cold front passed through the Wallops area.

The greatest amount of rainfall in a 24-hour period was 1.26 inches that fell on October 11 and 12. There are usually seven days during the month with measurable rainfall; we doubled that this year with 14 days.

What should we expect during December?

Normally, high temperatures are in the low 50s at the beginning of the month, falling into the upper 40s by month's end. Overnight lows usually start out in the mid-30s, falling to nearly 30 degrees by the end of the month. The record high temperature for December is 76 degrees set on Dec. 8, 1978. The record low of 4 degrees was set on Dec. 21, 1989.

Measurable precipitation normally falls on nine days in December, averaging a monthly total of 3.2 inches. Measurable snow usually falls on one day during the month, averaging a depth of 1.3 inches.

Bob and Ted, in the Weather Office, wish everyone a safe and happy Thanksgiving.



Thanksgiving Dinner

The annual Thanksgiving Dinner will be held on November 21. The cost is \$6.

Take out orders for three or more dinners must be submitted to the WEMA Business Office by email: mfgozali@pop100.gsfc.nasa.gov or by fax: x1582, no later than November 18. No orders will be taken by phone.

Take out orders will be picked up in the Williamsburg Room. For further information call x1457.

Combined Federal Campaign Fun Day



CFC Chairperson, Pam Taylor, and Co-Chair, Amy Taylor



Bernie Pagliaro, Pam Taylor, and Jane Penn



Claudia and Bruce Underwood



Todd Winfield



Diana Jester, Cheryl Johnson, Sandy Savage and Linda Layton



Dorine Trent



John Gerlach and Bernie Pagliaro

Photos by Betty Flowers and James Mason-Foley

Schedule your Mammogram

The Sentara Leigh Hospital Mobile Mammography Van is coming to Wallops Flight Facility on November 19 to perform Mammography Screenings.

Civil servant participants must have a breast exam performed by a physician within 3 months prior to the date of the mammogram. You may have the exam at the Health Unit, or obtain a form at the Health Unit authorizing your private medical doctor to provide this information.

Anyone interested in scheduling an appointment should call the Wallops Health Unit on x1266 by November 15.

Refuge Open for Night Sky Show

The Chincoteague National Wildlife Refuge will open its gates in the early morning hours of November 19, giving skywatchers the opportunity to view the Leonid meteor "shower".

The gate will open at 4:30 a.m., instead of the usual 6 a.m.

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Editor

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